3.3.8 Wetland Group

Most of the information in Section 3.3.8 is reproduced or adapted from "Wisconsin's Biodiversity as a Management Issue" (Addis et al. 1995) and the WDNR Handbook "Ecological Landscapes of Wisconsin".

Wetland communities have a common characteristic - their soil, or other substrate, is periodically saturated with or covered by water. A wetland is defined in the *Wisconsin Statutes* as "an area where water is at, near, or above the land surface long enough to be capable of supporting aquatic or hydrophytic vegetation and which has soils indicative of wet conditions".

Wetlands form where the shape of the land is conducive to retaining water, including flat areas or depressions with limited outflow, where groundwater is present at the land surface, and in floodplains with water flow-through. Wetlands can sometimes form in unlikely places, such as on slopes, when the local climate produces continually wet conditions (Verry 1988). Landscape features and other variables that vary from site-to-site will influence both ecological function and plant and animal diversity.

Wetlands are part of the water cycle of all ecosystems, and their location in the landscape allows them to function as a buffer between upland areas and surface waters (Weller 1981). Wetlands perform a number of natural functions that benefit natural ecosystems and society. Water quality is often dependent upon wetlands because they serve to trap sediment, remove nutrients, protect shorelines, and slow the effects of flood water. They also serve as both discharge and recharge areas for groundwater and provide habitat for many species of plants and animals (Stearns 1978). In part due to these functions, wetlands exhibit higher biological productivity than most other community types, and support rare biota. Currently (2001), 43% of all federally-listed threatened and endangered species use wetlands at some point in their life cycles (Feierabend 1992). In Wisconsin, 32% of the state's listed species are wetland dependent. Further loss or degradation of wetlands would affect a disproportionate share of Wisconsin's rare species.

At present, Wisconsin has lost 47% of its original ten million acres of wetlands. Many of the remaining 5.3 million acres are in the northern third of the state (Wisconsin DNR 1990). In some southern Wisconsin counties, the amount of wetland loss is well over 75%. Wisconsin's losses are reflective of the national status of wetlands; it is estimated that one-half of the nation's original 221 million acres of wetlands have been lost (Feierabend 1992). A large amount of remaining acreage in Wisconsin exists in a partly altered state, such as with old drainage ditches still functional enough to change the hydrology of the wetland. Much of this remaining wetland acreage was at one time disturbed, either by drainage (followed by restoration) or by being cleared, repeatedly burned, grazed, or periodically plowed (Curtis 1959). Disturbance and other factors have opened many wetlands to invasion by non-native invasive species that can reduce the ecological value of wetlands.

During the development of the Wisconsin Strategy for Wildlife Species of Greatest Conservation Need, the Wetland Group included the following community types:

- Alder Thicket (Section 3.3.8.1, Page 3-735)
- Bog Relict (Section 3.3.8.2, Page 3-743)
- Boreal Rich Fen (Section 3.3.8.3, Page 3-749)
- Calcareous Fen (Southern) (Section 3.3.8.4, Page 3-753)
- Coastal Plain Marsh (Section 3.3.8.5, Page 3-759)
- Emergent Aquatic (Section 3.3.8.6, Page 3-764)
- Emergent Aquatic-Wild Rice (Section 3.3.8.7, Page 3-775)
- Ephemeral Ponds (Section 3.3.8.8, Page 3-782)
- Great Lakes Coastal Fen (Section 3.3.8.9, Page 3-790)
- Interdunal Wetland (Section 3.3.8.10, Page 3-797)

Summary of Vertebrate Species of Greatest Conservation Need Associated with Wetland Communities

58 Birds
12 Herptiles
8 Mammals

78 Total Species

- Northern Sedge Meadow (Section 3.3.8.11, Page 3-803)
- Open Bog (Section 3.3.8.12, Page 3-813)
- Shrub Carr (Section 3.3.8.13, Page 3-822)
- Southern Sedge Meadow (Section 3.3.8.14, Page 3-831)
- Submergent Aquatic (Section 3.3.8.15, Page 3-838)
- Submergent Aquatic – Oligotrophic Marsh (Section 3.3.8.16, Page 3-850)

The vertebrate Species of Greatest Conservation Need in each of these wetland communities are presented in the following sections along with information on opportunities, threats, and priority conservation actions. In addition, the natural communities included in the Aquatic Group are closely related to some of the natural communities present in the Wetland Group. Specifically, the submergent aquatic and emergent aquatic natural communities or their variants (i.e., emergent aquatic-wild rice and submergent aquatic-oligotrophic) could potentially be present in all of the aquatic communities. For that reason, the reader is encouraged to also review the community information in Section 3.3.1 (Aquatic Group) when working with the wetland communities listed above.

Similarly, several communities that often meet the "legal" and scientific definition of a wetland are included in other community groups within this document. Examples of those communities (along with their location in the document shown in parenthesis) include the following: wet prairie (Section 3.3.3.6), northern hardwood swamp (Section 3.3.5.4), northern wet forest (Section 3.3.5.6), floodplain forest (Section 3.3.7.2), southern hardwood swamp (Section 3.3.7.7), southern tamarack swamp (Section 3.3.7.9), and white pine-red maple swamp (Section 3.3.7.10).